

CLAIMS

1. A communication terminal apparatus that relays communication between a base station and another communication terminal in a communication system of an OFDM (Orthogonal Frequency Division Multiplex) scheme, said communication terminal apparatus comprising:

a storage section that stores communication data between the base station and the another communication terminal; and

a transmission section that frequency division multiplexes the stored communication data with data of the communication terminal apparatus and transmits the frequency division multiplexed data at a timing for transmitting the data of the communication terminal apparatus.

2. The communication terminal apparatus according to claim 1, wherein said transmission section maps the stored communication data to an available subcarrier to which the data of the communication terminal apparatus is not mapped among subcarriers that the communication terminal apparatus can use, and performs the frequency division multiplexing.

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3. The communication terminal apparatus according to claim 1, further comprising a reporting section that

reports to the base station that requests to relay the communication data or the another communication terminal that said transmission section transmits communication data between the base station and the another
5 communication terminal.

4. A communication terminal apparatus that communicates with a base station via a relay of another communication terminal in a communication system of an
10 OFDM-TDD (Orthogonal Frequency Division Multiplex - Time Division Duplex) scheme, wherein said communication terminal apparatus performs reception processing at a timing for uplink communication for the communication system.

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5. The communication terminal apparatus according to claim 1, wherein said communication system is a communication system of an OFDM-FDD (Orthogonal Frequency Division Multiplex - Frequency Division Duplex),

20 further comprising a reception system that performs reception processing in uplink frequency, wherein

said communication terminal apparatus transmits the stored data to the another communication terminal in uplink frequency.

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6. A communication terminal apparatus that communicates with a base station via a relay of another

communication terminal in a communication system of an OFDM-FDD (Orthogonal Frequency Division Multiplex - Frequency Division Duplex) scheme, said communication terminal apparatus comprising a reception system that
5 performs reception processing in uplink frequency,

wherein said communication terminal apparatus transmits data of the communication terminal apparatus to the another communication terminal in uplink frequency.

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7. A communication relay method that is used at a communication terminal relaying communication between a base station and another communication terminal in a communication system of an OFDM scheme, said
15 communication relay method comprising:

a storage step of storing communication data between the base station and the another communication terminal in a buffer;

a multiplexing step of frequency division
20 multiplexing the stored communication data with data of the communication terminal; and

a transmission step of transmitting the frequency division multiplexed data at a timing for transmitting data of the communication terminal.

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8. A communication system that is a communication system of an OFDM scheme comprising a base station and

a plurality of communication terminals, wherein:

when a first communication terminal is requested to relay communication with the base station from a second communication terminal, the first communication terminal temporarily stores relay data and frequency division multiplexes the relay data with data of the first communication terminal, transmits the frequency division multiplexed data at a timing for transmitting the data of the first communication terminal, and reports the relay to the second communication terminal; and

when the second communication terminal receives the report of the relay from the first communication terminal, the second communication terminal reports the relay to a user of the second communication terminal.

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9. A communication apparatus that relays communication between a first communication apparatus and a second communication apparatus in a communication system of an OFDM scheme, said communication apparatus comprising:

20 a storage section that stores communication data between the first communication apparatus and the second communication apparatus; and

a transmission section that frequency division multiplexes the stored communication data with data of the communication apparatus and transmits the multiplexed data at a timing for transmitting the data of the communication apparatus.

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